

RECORDS OF THE PAST

JULY, 1902

VOL. I



PART VII

THE OLDEST CIVILIZATION OF GREECE ¹

BY PROF. GEORGE FREDERICK WRIGHT, D.D., LL.D., F.G.S.A.

THE literary history of Greece reaches no farther back than the beginning of the VII century B.C. Beyond that period Thucydides and Herodotus did not venture with any positive statements of facts. The poems of Homer, indeed, seemed to carry us back into a remoter past, but his historical references were too rhetorical and vague to be of any positive service to matter-of-fact historians; while previous to the Homeric era there was no glimmer of light. By the excavations of Schliemann in Troy, Mycenæ, and Tiryns, from 1870 to 1880, however, a new chapter was opened which has shed a flood of light upon the prehistoric civilization of Greece, and revealed most interesting connections between it and the civilization both of the East and of the West.

But the excavations at Troy were dependent for their full meaning upon the later ones at Mycenæ and Tiryns, two fortified citadels bordering the plain of Argos, which spreads out around the head of the Gulf of Argolis, the most prominent of the many sheets of water projecting into the Peloponnesus. Mycenæ was the seat of the government of Agamemnon, the most prominent of the Homeric heroes of the Trojan war, who, it was said, furnished 100 ships as his own quota, while lending 60 more to the Arcadians. As the siege of Troy progressed, the responsibility of its conduct fell upon him, and he performed marvels of bravery. In the legends of the Peloponnesus he figures as the highest type of the powerful monarch.

How much of reality there was as a basis of these legends it is impossible to tell. But the case is stated in a most interesting manner by the eminent English historian Freeman, who institutes a comparison between Agamemnon and Charlemagne.

The legend of Charlemagne, amidst infinite perversions, preserves a certain groundwork of real history; I should expect to find in the legend of Agamemnon a similar groundwork of real history. There is, of course, the all-important

¹*The Oldest Civilization of Greece. Studies of the Mycenaean Age.* By H. R. Hall, M.A., Assistant in the Department of Egyptian and Assyrian Antiquities, British Museum. London, 1901, David Nutt; Philadelphia, 1901, J. B. Lippincott Co. 8vo. Pp. xxxiv and 346, numerous illustrations.

difference that we can test the one story, and that we cannot test the other, by the certain evidence of contemporary documents. This gives us certainty in one case, while we cannot get beyond high probability in the other. . . . Later Grecian history would never lead us to believe that there had been once a single dynasty reigning, if not as sovereigns, at least as suzerains, over a large portion of insular and peninsular Greece. So, later mediæval history would never lead us to believe that there had once been a Latin or Teutonic emperor, whose dominions stretched from the Eider to the Ebro. But we know that the Carolingian legend is thus far confirmed by history; there is, therefore, no *a priori* objection to the analogous features of the Pelopid legend. The truth is that the idea of such an extensive dominion would not have occurred to a later romancer, unless some real history or tradition had suggested it to him. So, again, without some such groundwork of history or tradition, no one would have fixed upon Mycenæ, a place utterly insignificant in later history, as the capital of this extensive empire. The romances have transferred the capital of Karl from Aachen to Paris; had it really been Paris, no one would have transferred it to Aachen. . . . Whether Agamemnon be a real man or not, the combination of internal and external evidence leads us to set down the Pelopid dynasty at Mycenæ as an established fact.

In the excavations at Troy, Schliemann found the remains of no less than 9 distinct cities under each other; the *débris* of each one having been leveled off to furnish the foundations of its successor. Schliemann had taken the next to the lowest of these cities for the Homeric Troy, but subsequent investigations, coupled with the results of excavations at Athens, Mycenæ, and various other places, have shown that the Troy of Homer was the sixth from the bottom, or the third below the Roman Ilium, which now rests upon the surface. These investigations have led to most interesting discoveries concerning the Mycenæan civilization and the various steps of progress leading up to it.

Mycenæ was situated in the northeast portion of the beautiful and fertile plain of Argos, where it rises upon the flanks of the mountain range which separates the plain from the Saronic Gulf. Two peaks, Hagios Elias and Zara, rise immediately in its rear to an elevation of from 2,000 to 2,500 feet; the acropolis of Mycenæ itself being 910 feet above the sea, commanding a magnificent view of the plain of Argos and of the gulf and of the mountain ranges which stretch from north to south through the center of the Peloponnesus.

The entrance to the acropolis is through the Lions' Gate, which has long been regarded as the most ancient important specimen of Grecian sculpture in existence. It is now pretty certainly proved to represent a period of artistic development preceding the so-called classical period by several centuries. The gateway is approached by a gradually ascending roadway, 50 feet long and 28 feet wide, inclosed between parallel walls of cyclopæan masonry. Only 7 men could walk abreast through this entrance, where, if an attacking party, they would be exposed to a rain of missiles in front and on both flanks. The wall is finally pierced by a gateway 10 feet 4 inches high, with a width of 9 feet 10 inches at the bottom and 9 feet at the top.

Above the gateway there rests a lintel of such enormous proportions as to excite the greatest wonder that engineers of that early date should have been able to transport it and place it securely in its present position. This immense stone is 16½ feet long, 8 feet broad, and 3½ feet thick in the middle. But by a device common in many of the structures of that date it



GENERAL VIEW OF THE RUINS AT MYCENÆ
[From photograph by Frederick Bennett Wright.]

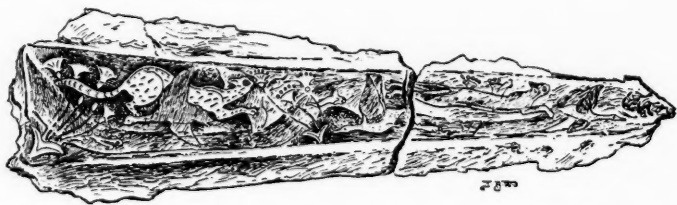


AGAMEMNON'S CIRCLE. THE REAR OF THE LION GATE APPEARS IN THE UPPER RIGHT HAND
CORNER OF THE PICTURE
[From photograph by Frederick Bennett Wright.]

is shielded from the irresistible pressure of the superincumbent wall by a pointed arch formed by laying the heavy stones so that they regularly overlap each other until meeting 10 feet above the lintel.

This space is filled by a single slab 10 feet high, 12 feet broad at the bottom, and 2 feet thick, upon which is sculptured in relief two lions reared on their hind legs with their fore paws resting upon an altar-like pedestal. The heads of the lions are now missing, and they were evidently not of a piece with the bodies, but wrought separately, and fastened on so as to face the entrance. From their surprisingly life-like character, and from the remarkable understanding of feline motion and form which speaks from the extended bodies, they are proved to belong to a very early stage of artistic development before it had been corrupted by the conventionalities which characterized the later stages of art in all the great centers of early civilization; while from their resemblance, both in subject and treatment, to the sculptures found in Asia Minor and amid the earlier ruins of Babylonia, a connection is plausibly traced between them and the earlier classic age of art in the Euphrates Valley.

Upon passing through the Lions' Gate into the fortress, we reach the scene of Dr. Schliemann's excavations in 1876 and 1877. These consist of a curious circular inclosure, 87 feet in diameter, fenced in by a double row of limestone slabs set vertically in two concentric rings about 3 feet apart. The space between is supposed originally to have been filled with small stones and earth, and then covered with cross slabs of which several still remain in position. Within this circle were found 6 tombs buried to a depth of from 12 to 30 feet beneath the accumulated *débris*. In one of these tombs there were 3 skeletons "literally laden with female ornaments of gold, among which were 6 diadems, one of which was still encircling a skull, an ornate gold-headed hairpin," 6 gold spirals for the hair; 15 gold pendants; 11 gold necklace-coils; 6 gold bracelets; 8 gold crosses and stars; 10 gold grasshoppers hung from gold chains; 1 gold butterfly; 4 gold griffins—one flying; 4 gold lions couchant; 12 gold ornaments, each with two stags reposing upon branches of a date palm; 10 ornaments with lions—one with two lions attacking an ox; 3 gold *intaglios* with vigorous figure-subjects; 51 gold ornaments embossed with cuttle fish, butterflies, swans, eagles, hippocampi, and sphinxes; 4 female idols in gold, including two of Aphrodite with doves; 18 gold wheels and tubes; 2 pair of gold scales; 1 gold mask of child; 1 gold goblet embossed with fishes swimming; 5 gold vases with lids; and, finally, 701 "large, thick, round, plates of gold with a very pretty decoration of *repoussé* work in 14 different designs—spirals, flowers, cuttle fish, butterflies, etc."



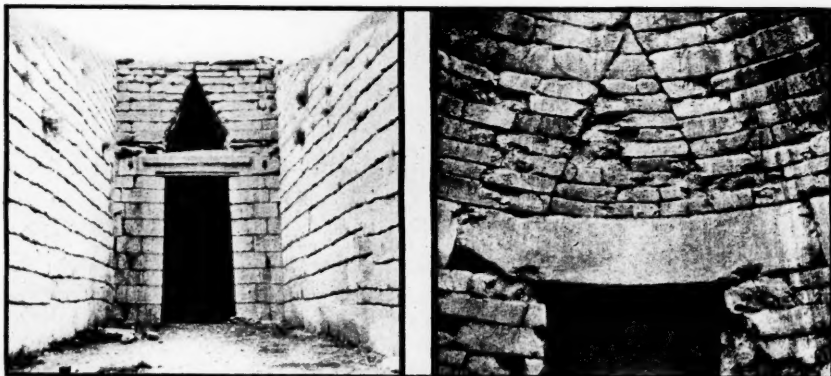
BRONZE SWORDBLADE FROM MYCENÆ, WITH INLAID EGYPTIAN DESIGN OF CATS HUNTING WILDFOWL
[From *The Oldest Civilization of Greece*, p. 58.]



MYCENÆAN GOLDEN CUP, FROM MYCENÆ (THE LION'S HEAD IS EGYPTIAN STYLE)
[From *The Oldest Civilization of Greece*, p. 29.]

In addition to this profusion of gold, there were 4 silver vases and goblets, 2 silver rods plated with gold; a magnificent alabaster vase and cup; 1 bronze vase and 3 large bronze caldrons; several engraved gems; and "an enormous quantity of amber beads." Such is a rapid inventory of the funeral outfit of these Mycenaean ladies, in which Dr. Schliemann enumerates 870 objects in gold alone (illustrated by 86 figures), not including "many small gold ornaments," "a large quantity" of gold beads, and "another large quantity of small pieces of very thin beaten gold with which the whole tomb was strewn."

In another tomb 5 skeletons were found, 3 with their heads to the east, and 2 to the north. Three of these were those of men. These 5 bodies, said Schliemann, "were literally smothered in jewels," and 70 pages of his great report are filled in describing them. But in addition to the jewelry there were 34 large copper jugs and caldrons, one of the latter being 2½ feet in diameter; while in one heap lay more than 20 bronze swords, one of which was ornamented with a representation of a lion hunt inlaid in gold. Three of the dead had golden masks still on their faces; while two of them were covered with golden breastplates, and near the head of one was a gold crown, and on the arm of another a gold bracelet of enormous size. Besides these there were 600 golden ornaments of a variety of patterns, with a great silver oxhead with golden horns and golden and silver vessels in large numbers; while 800 amber beads lay in two heaps besides two of the skeletons. More than half a pound of small gold leaves was gathered up.



ENTRANCE TO TREASURY OF ATREUS

STONE OVER THE ENTRANCE TO ONE OF THE
"BEEHIVE TOMBS" TAKEN FROM THE INSIDE

[From photographs by Frederick Bennett Wright.]

It is no wonder that Schliemann supposed this to be the veritable tombs of Agamemnon and his companions, who were so cruelly murdered upon their return from the capture of Troy. But later investigations make it clear that this could not be the case; for closer examination shows that the 19 persons buried in these graves did not expire at one and the same time, which would overthrow the theory of Schliemann. "That they are the tombs of a royal line is, however, beyond doubt." But it is of a dynasty whose names have not come down to us.

Outside of the acropolis and lower down the hill is a considerable area covered with the remains of the larger city that gathered around it in more peaceful times. Among the most remarkable objects found in these remains are certain "beehive tombs" which have since been found to be distributed pretty widely, and are believed to be remnants of the pre-Homeric age. The principal of these in Mycenæ are the so-called "treasury of Atreus," locally known as the tomb of Agamemnon and the "tomb of Clytemnestra."

The "treasury of Atreus" is in the side of the hill about half way up the slope of the rocky ridge leading from the valley to the acropolis. Here a horizontal passage-way 115 feet long and 20 feet wide has been dug into the hill, its sides are lined with masonry, and rise with the slope of the ridge to be 45 feet high at the entrance to the tomb. The façade of the tomb is formed by a vertical wall 20 feet wide and 46 feet high. The door is 17 feet 9 inches high, and its breadth varies from 8 feet 9 inches on the ground to 8 feet 1 inch on the top, and the thickness of the façade is 17 feet 6 inches. The lintel is composed of two enormous blocks, the inner one measuring 29 feet 6 inches in length by 16 feet 6 inches in breadth, and 3 feet 4 inches in thickness, with an estimated weight of 120 tons. Over the lintel there is a triangular relieving space such as has been already described over the Lions' Gate.

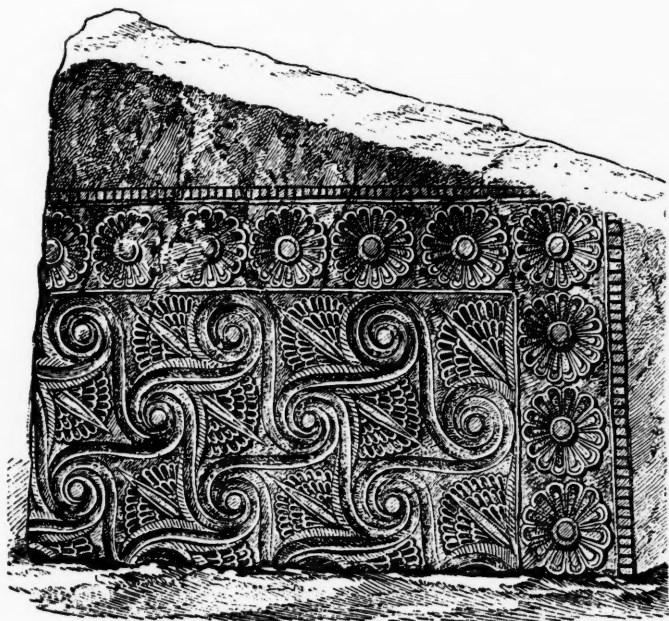
The chamber entered by this portal is a circular vault 48 feet in diameter upon the ground, and 48 feet high. It is formed by 33 courses of large hewn blocks perfectly joined—each course a perfect circle and all gradually converging in a smooth curve to the apex, where the dome is capped with a single stone. Above the third course of stone, bronze nails were originally



ASIATIC SUB-MYCENÆAN VASE, FROM
MYLASA IN KARIA



VASE WITH ORIENTALIZING DESIGNS,
FROM CYPRUS



CEILING OF THE "TREASURY OF MINYAS," AT ORCHOMENOS (EGYPTIAN DESIGN)
[The illustrations on this page are taken from *The Oldest Civilization of Greece*, pp. 43, 44 and 167.]



DESIGN IN RELIEF FROM A GOLDEN CUP FOUND AT VAPHIO IN LAKONIA (ATHENS MUSEUM; A REPRODUCTION IS IN THE ASHMOLEAN MUSEUM, OXFORD)

[Cf. Perrot-Chipiez, *Hist. de l' Art*, vi. pl. xv.]

fixed in circles at recurring intervals, some of these still remain in place, while the holes indicate where others have been. These were probably to fasten ornaments, and in some of the circles friezes for the decoration of the room.

Adjoining the domed chamber is a square rock-hewn side-chamber measuring 27 feet square by 19 feet high. This was probably originally cased with alabaster with a single slab of that material covering its upper surface. What are supposed to be the remains of a foundation for sustaining a supporting pillar of this slab are found in the middle of the room. Altogether the structures are perhaps the most impressive to be found among the remains of ancient Greece.

About 400 yards farther up the hill the so-called "tomb of Clytemnestra" is found whose proportions are even larger than the other, and similar to it in general plan. The 5 others in the near vicinity present the same features, but each with slight variations.

But the greatest of these domed tombs is the one found at Orchomenos, in the center of the Peloponnesus about half way between Mycenæ and Olympia. This was spoken of by Pausanias as the "treasury of Minyas." This was excavated by Schliemann in 1880, but it was then already largely in ruins, having been resorted to by the inhabitants as a quarry for building a neighboring chapel. It is ascertained, however, that the doorway was 17 feet 11 inches high, 8 feet 10 inches broad at the bottom, and 8 feet at the



DESIGN IN RELIEF FROM A GOLDEN CUP FOUND AT VAPHIO IN LAKONIA (ATHENS MUSEUM; A REPRODUCTION IS IN THE ASHMOLEAN MUSEUM, OXFORD)

[Cf. Perrot-Chipiez, *Hist. de l' Art*, vi. pl. xv.]

top, and that the circular vault was 46 feet in diameter, and built of well-wrought marble. Bronze nails, also, for affixing ornaments pierced the courses at regular intervals above the fifth.

In speculating concerning the use of these vaults, there would seem to be little doubt that they were burial-places prepared by families of great wealth and power. But they stand entirely apart from any structures of the classical period of Grecian history, and point back to a civilization closely allied to that which flourished in Egypt and Babylonia and spread through Asia Minor. The evident rich ornamentation of these burial vaults and the immense accumulations of treasures deposited with the dead in the tombs of the citadel are characteristic of that earlier age which built the pyramids, and provided liberally for the supposed wants of the dead as they wandered among the shades of the invisible world.

In this we get a glimpse of the religious faith of that earlier time. As is well said by Dr. Tsountas,

To us it seemed a useless waste, as it did to the Greeks of the classic age, in whose tombs we find few precious votives. The Mycenæans, however, as all peoples at a like stage of development, looked upon it in a different light. To them the future life was only a prolonging of the present, and those who dwelt in splendid palaces in this world craved a corresponding abode after death. Did not these same people think that to insure their comfort in the other world they must take with them some portion of their riches, even slaves to wait upon them? It is true that the older acropolis graves are simple and unadorned, but their wealth of offerings compensated for the simplicity of their construction, while the votives in the later and grander vaulted tombs are neither so numerous nor so valuable.

The period which Mr. Hall would assign to the Mycenæan kingdom extends from 1700 to about 1000 B.C., during the larger part of which time, the results of the excavations go to show, that Mycenæan influence was predominant not only over the whole extent of Greece proper, but over the islands of the Ægean Sea and along its Asiatic coast and in Cyprus. Among the indications of a considerable freedom of intercourse with the civilizations of the East are the finding of objects of ivory and the frequent occurrence of implements and ornaments of bronze. Indeed, the Mycenæan period is largely contemporaneous with the bronze age.

Now, though copper appears in some of the buried cities of Greece which preceded the Mycenæan period, it is not by any means probable that bronze, which consists of an artificial amalgam of copper and tin or copper and antimony was independently discovered in Greece.

Bronze seems to have been commonly used in Babylonia, at least as early as 3000 B.C.; some time before this it first appears in Egypt, but is not common there until a much later period. It seems very probable that bronze was first invented by the Sumerians. . . . At some time between 2000 and 1500 B.C. the knowledge of bronze must have spread from Mesopotamia and from Egypt through Asia Minor and Cyprus to Greece, whence it passed to Italy and the rest of Europe.

But there is little evidence of the use of iron in the Mycenæan age. Iron, however, was known in Egypt 3500 B.C.

That iron objects were occasionally exported from Egypt to Greece in the Mycenæan period, or even earlier, is therefore quite possible; the iron rings

found at Mycenæ and the iron staff handle from Troy may have come from Egypt, but it is evident that iron was not generally employed in Greece until after the Dorian invasion (about 1000 B.C.).

The volume of Mr. Hall is, as it is styled, merely "studies" consisting chiefly of essays which he has printed for the criticism or the further elucidation of the great works of Schliemann and Tsountas, and in general they assume familiarity with those works. He has, however, added much to our understanding of the discoveries of these original explorers and shed much light upon the probable connection of the prehistoric civilization of Greece with that of Babylon and Egypt. It was, however, in the main peculiar to itself and independent even of the great Aryan migration which came in both from the north and from the south. But, at best, the "oldest civilization of Greece" is far from being the oldest civilization of the world.



GOLDEN GRIFFIN, FROM MYCENÆ (THE DESIGN IS OF PURELY EGYPTIAN ORIGIN)

[From *The Oldest Civilization of Greece*, p. 30.]

* * * *

ORIGIN OF THE AMERICAN ABORIGINES

INTRODUCTION

IT is but a few years ago that Miss Edwards planned for organized effort to give to the world the archaeological and literary treasures of ancient Egypt. A little later we find Dr. Peters, in the midst of University duties, planning to do the same for Babylonia, and Mr. Clark, the banker, giving time, influence and money, to carry out his plans. M. Jacques de Morgan, the master explorer, while seeking for the earliest remains of Egyptian civilization, was longing for the opportunity to trace it back to its source, holding to the theory that it was of Asiatic origin. He finally resigned the much coveted position of Director General of Egyptian Antiquities and started for Persia. Miss Edwards lived to see the Egypt Exploration Fund, of which she was the chief founder, fairly started in the grand work it has already accomplished in the Nile Valley. Dr. Peters has seen repeated expeditions follow the first one he led into the Tigro-Euphrates Valley, and each one return with priceless treasures of antiquity until the Exploration Society he brought into being is an honor to the City and University of its birth and to himself. M. de Morgan returned to Paris from his second season's work in the ruins of the ancient city of Susa, having found his theory of the Asiatic origin of Egyptian civilization to be true. The work inaugurated by these three persons has added several thousands of years to our knowledge of the history of the world.

But here in America no organized effort was made to ascertain the origin of its aborigines until Mr. Morris K. Jesup, the distinguished President of the American Museum of Natural History, created a liberal en-

dowment, out of his private fortune, for a thorough and systematic exploration of the Northwestern part of our Continent and the Eastern part of Asia, for the purpose of settling the question of an Asiatic origin, of the American Aborigines by way of the North Pacific Ocean. He commissioned Prof. F. W. Putnam, who undoubtedly possesses the widest knowledge of American Antiquities, to organize the various expeditions to carry on the work, and under his direction they are now conducting their investigations. We believe that the final results of the work inaugurated by Mr. Jesup will settle this very interesting as well as difficult question.

It is our intention to give from time to time abstracts of the reports made by the expeditions charged with investigating the various phases of the work undertaken. To Mr. Harlan I. Smith of the American Museum of Natural History was intrusted the exploration for archæological remains of the prehistoric race in British Columbia. His work was not an inviting one. He did not expect to find the ruins of once great cities, which always create enthusiasm in the explorer. But for two seasons he has searched diligently in the prehistoric mounds and graves of that region. The main results of his first season's work are given in the following abstract of his report. He has gained a thorough knowledge of the archæology of the region and must henceforth be regarded as our chief authority on the subject in British Columbia.

* * * *

ARCHAEOLOGY OF LYTTON, BRITISH COLUMBIA

BY HARLAN I. SMITH

LYTTON is situated at the confluence of the Thompson and Fraser Rivers, in southern British Columbia. Below Lytton the Fraser River breaks through the Coast Range, forming a deep canyon, while above Lytton it flows through the plateau, which extends from the Coast Range to the western range of the Rocky Mountains. The climate of this area is rather dry, and consequently the vegetation is somewhat scanty. The higher parts of the country are covered with open timber. The Indians inhabiting this area at the present time subsist largely on fish, of which there is an abundant supply in the rivers, particularly at the time when the salmon ascend to spawn; but fish is not by any means as important a staple as it is among the tribes of the coast. Roots and berries, which are gathered on the hills, form an important part of the diet of the people, who also hunt deer and bear, on which they subsist when living at a distance from the rivers.

On account of the importance of the fish diet, the more permanent villages of the Indians are located on the larger rivers, principally on the Fraser and Thompson. Places on the banks of the river which are not too far removed from berrying and root-digging grounds are the favorite resorts of the Indians. Lytton is most favorably located for all these pursuits, and consequently it has always been an important village. Evidently the same conditions prevailed in prehistoric times, as is shown by the extensive remains of villages and the large burial-grounds found at this place.

A large burial-ground on the point of land between the Fraser and Thompson Rivers has long been known. It was first described by Dr. George M. Dawson, who investigated it while engaged in geological work

in southern British Columbia during the years 1877 and 1888-90.¹ The collections made by Dr. Dawson are in the Museum of the Geological Survey of Canada.

In July, 1897, the Jesup North Pacific Expedition made a series of explorations in this vicinity. The following descriptions are based upon these explorations, which were carried on by the writer.

The explorations were largely confined to the main burial place and village site, situated on the sand hill that is found along a terrace between the canyons of the Fraser and Thompson Rivers and immediately to the north of their confluence.² This is by far the most important site near Lytton. The hill is about 100 feet above the river, and is approximately 500 feet in length by 200 feet in breadth. A large pine tree is growing on the crest of the hill, in the middle of the burial place. An Indian trail passes to the west of the area, and the government road bounds it on the east. No definite age can be assigned to any of the remains secured, as the wind, which sweeps strongly up the canyon of the Fraser River, is continually shifting the light, dry sand from place to place. It uncovers the graves, disarranges them, and sometimes re-covers the remains. Miners and Indians often camp at this site; and the objects left or lost by them are scattered on the surface, and often covered by the shifting sand. All these objects must be distinguished from the undisturbed burial of the prehistoric people. The surface is strewn with human bones which have been uncovered by the wind. There are also scattered about shell beads, wedges made of antler, scrapers and chipped points of stone such as are used for arrows and knives, grinding-stones, celts, and other material similar to that found in the graves. There is a large box at this place, in which the Indians deposit the bones and objects as they are uncovered by the wind, but sometimes they bury them. The bones they consider to be those of Indians, although they do not know whether they are of their own ancestors or not. It is reasonably certain, judging from the complete absence of European objects in the undisturbed graves, that they antedate contact with the whites. A number of them must be several hundred years old.

Extending to the north from the hill, and on the same terrace, were found old hearths, indicated by broken and cracked firestones, large slabs of grinding-stones, and remains of underground houses. A few human bones were secured from the edge of the gravel-pit made by miners near an Indian cemetery known to be modern by the portions of the fence which still remain.

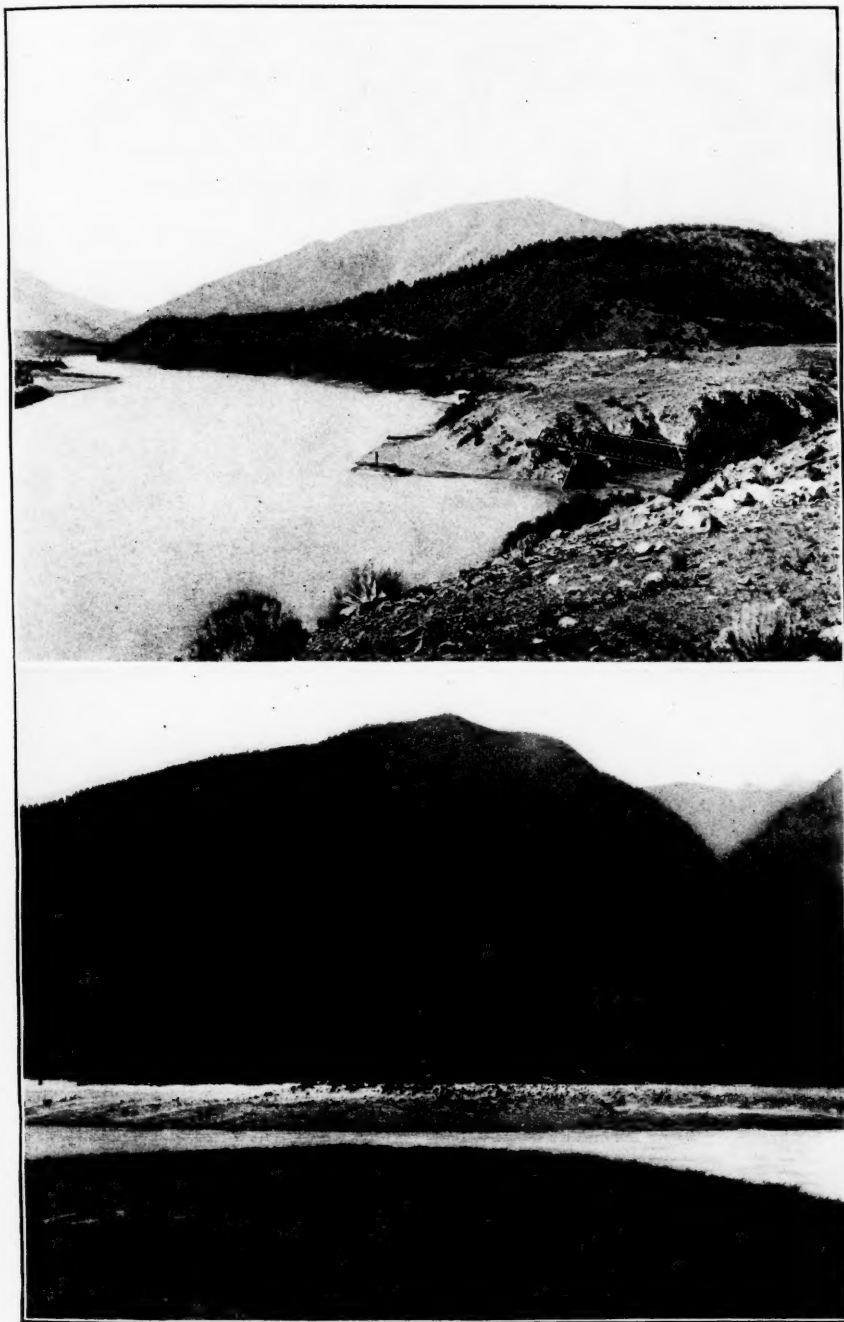
Southward from the sand hill, on the level of the terrace, were found traces of similar hearths, charcoal, and rolls of birch bark partly burned. Here were also remains of underground houses. There were two large bowlders which the Indians report were used in the ceremonials performed by young men or by youths when reaching maturity. It is said that these youths were required to cover the distance from one boulder to the other in a prescribed number of leaps.

About half a mile below Lytton, on the high gravel terrace on the left bank of the Fraser River, was found a second village site.

A third village site was located on the high terrace on the left bank of the Fraser River, about 2 miles north of Lytton. The place is a meadow

¹*Transactions of the Royal Society of Canada*, Sect. D, 1891, pp. 10-12.

²See upper view on p. 207.



VIEW UP THE FRASER RIVER NORTH FROM LYTON, B. C.

VIEW ACROSS THE FRASER RIVER, SHOWING HOUSE PIT IN FOREGROUND

in an open pine forest east of the government road. South of it is a small brook, ending lower down in a marsh. This may have determined the location of the site, since it affords a supply of fresh water high above the Fraser River.

A fifth ancient village and a burial place were located at the north side of the mouth of Stein Creek, which empties into the Fraser River, from the west, at a point about 4 miles above Lytton. This place is on the tableland overlooking the Fraser River, and near the present Indian village of Slame. Here were human bones, fragments of pecten shells, fragments of steatite pipes, and wedges of antler, scattered by the wind. On the lower terrace, close to Stein Creek, are remains of ancient houses which measured from 50 to 60 feet in diameter.

Some attention was given to the sixth site, which is marked by burials and traces of habitations on the low sandy terraces on the west bank of the Fraser River, about opposite the main burial place. These sites may or may not have been occupied at the same time.

All through this region are evidences of prehistoric habitations, located at varying distances from the larger village sites. This suggests that the mode of life of the prehistoric people was similar to that of the present Indians, among whom one or two families often live at some distance from the main villages.

Resources.—The resources of the prehistoric people of Lytton, as indicated by the specimens found in the graves, hearths, and about the village sites, were chiefly stone, copper, shell, bone, antler, teeth, the skins of animals, and vegetable substances.

Many evidences of the association of animals with man were found. While it may be that some of the animals whose remains are found in the village sites and burial grounds did not live with the people, having taken up their abodes in these places after they had been deserted, numerous worked and broken bones and teeth show that the animals to whom they belonged must have been useful to the prehistoric inhabitants of Lytton.

The present Indians of this area used dentalium shells, which are not imported along the Fraser River, but from the region north of Vancouver Island, over the mountains, down to the upper course of the Fraser River. The trade in these shells is in the hands of the Chilcotin, an Athapaskan tribe of western British Columbia. It is probable that in prehistoric times dentalium shells found their way to Lytton over the same route. It seems at least that the use of dentalium shells was much more extensive in the interior than it was in prehistoric times in the delta of the Fraser River.

Vegetable substances include charred pieces of wood from the hearths, and other charred fragments which had probably been portions of canoes, sticks, etc., that were found in various parts of the village sites. Pieces of wood were found wrapped in copper, and preserved by the action of the copper salts, the whole being probably an ornament of some sort. Birch bark charred, or preserved by the dryness of the climate, was found in the graves as lining or covering, and in the form of rolls. Probably it was also used for dishes. Charred berries, including bearberry, were found in the hearths; and to this day edible roots are plentiful in the vicinity. That they were dug for food is suggested by the presence of the digging stick handles. The seeds of a western species of *Lythospermum*, which may have been used for food, were frequently found in the hearths; and large numbers of them

were sometimes over the skeletons in the graves, as if that plant had been used as a covering of the bodies. A kind of gum that was found in a clam-shell spoon and on a bone handle for a stone knife resembles that from the fir and pine. Woven fabrics of vegetable fibre, possibly sagebrush bark, and portions of string made of the bark of red cedar, were found in the graves.

Hunting and Fishing; Digging Roots.—Many implements used in procuring food were found. By far the most numerous were chipped points of various sizes and shapes for arrows, knives and spears. The material commonly used for chipped points is glassy basalt. Practically all the smaller implements are made of this material. An unusually large number of fantastic forms of small chipped objects were found here. These are of the same material as the other small points.

It is remarkable that no rubbed stone points for arrows or spears, such as are numerous on the coast, were found, although rubbed fish-knives are quite common, and one rubbed slate point was obtained at Kamloops, 95 miles above Lytton in the Thompson valley.

The Indians now living in the valley of the Thompson River, near Lytton, still possess the art of chipping small stone arrow-points. To obtain the basalt they make journeys up the mountains, where they break it fresh from the quarry, in which state they claim that it can be worked more easily than the material sometimes obtained by breaking up the large chipped points found in the vicinity. These they believe were made by the raven before there were men on the earth, and they call them "raven arrows." Thus it would seem that at least the points were not made by the last few generations of the present tribe of Indians.

Two harpoon points made of antler, were found. Each point had two barbs on one side; and the base, which was slightly wedge-shaped, was perforated.

Preparation of Food.—Pestles or hammers served for crushing dried meat, berries, and other food. They are of various shapes, made usually from fine-grained, tough river pebbles, and many are much weathered. Some are simply cylindrical, in which case they are usually but slightly changed from the natural pebble by a little pecking or rubbing.

The typical pestle of Lytton has a well-defined head, larger than the tapering body, the sides of which meet the base at nearly right angles. These pestles seemed to have been used for rubbing as well as pounding. One of them, a fine-grained schistose gneiss, shows no evidence of having been used for pounding, but its corners and base are smooth.

Slate knives were discovered in excavating graves and hearths. They are similar in form to those now used on the coast for cutting up fish. A spoon made from the shell of a unio was found in one of the graves. It was the only spoon-like object discovered, and was partly filled with a gum resembling that from the pine of the neighborhood.

Habitations.—The houses of the prehistoric people of Lytton were similar to those used by the Indians up to recent times. This is evident from the large number of ancient house-pits at all of these sites explored.

The Thompson River Indians, who inhabit this area at the present time, used to live in underground lodges. This lodge is made by digging a circular hole in the ground, and erecting over it a framework of timbers shaped like a cottage roof. These timbers are covered with fir-boughs and earth. Since there is but little rain, a roof of this kind offers sufficient protection.

An opening is left in the center to serve not only as a chimney and window, but also as a door. A notched log—one end resting on the middle of the floor, the other projecting from this opening—constitutes the only means of entering the house.

When one of these houses goes to ruin, the circular pit is partly filled, but not enough to be entirely obliterated. It remains as a depression surrounded by a slight ridge. This ridge is composed of the earth and decomposed timbers of the roof. When the house is abandoned, much of the earth covering the roof slides down to the margin of the hole, where it accumulates, while the thin layer left on the roof only partly fills the room. Under the space where the composite door, window, and chimney were, the hole is left about as deep as ever, but may be partly filled with *debris* blown in by the wind.

For digging holes as well as for gathering roots the present Indians use a stick with a crutch-like handle. Such handles made of antler were found in the old village sites.

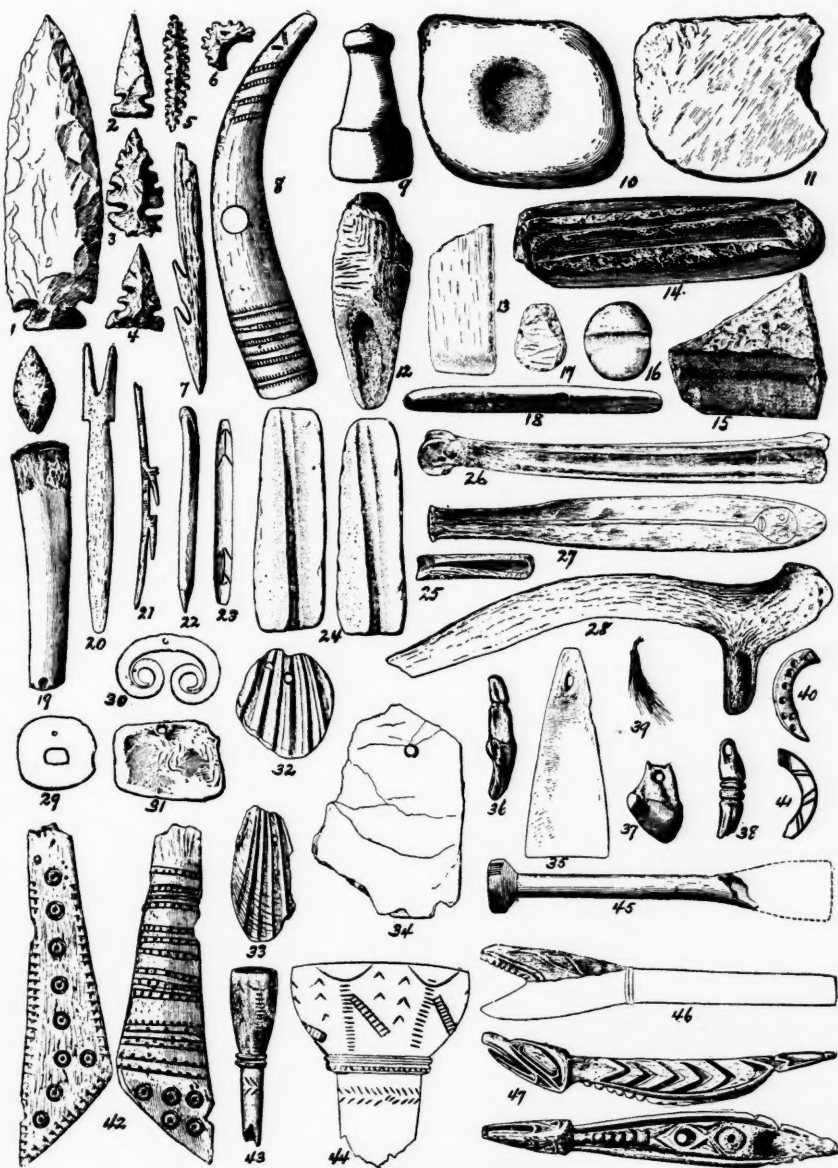
Tools.—Numerous wedges made of elk antler were obtained, which must have been very efficient for splitting timbers in the building of houses, for cutting firewood, and for general carpentry work. They were usually made from the large part of an elk antler, near its base, and cut off diagonally across. Some wedges which may have been used for special purposes were made of curved pieces of antler. They resemble in shape the curved wedges of the canoe builder of the coast Indians. The heads of some of the wedges are bruised and slivered by being driven with a stone pestle or maul. The use of a pestle for driving wedges gives it a concave base or one with a hollow in it. Rubbing tends to form a convex base. Some of the specimens have convex bases with a hollow in the centre. It seems probable that pestles were used for a variety of purposes.

The common deeply-pitted hammer-stone was not found at this locality; but stone hammers or mauls were secured, that probably had been hafted in some way, and used on both ends. They have a slight pit on either side, and the two ends are battered. One small granite pebble has a groove which extends nearly around it, and which, if continued, would form a spiral. There is no evidence of its use as a hammer-stone. It may have been a sinker, or it may have been covered with skin or other material and used as a club head. In the latter case the tendency of the groove to a spiral form would allow a withe to be firmly attached.

Oval boulders and flat pieces of sandstone were found which were probably anvils upon which to pound or to rub various substances.

The coast Indians use celts mounted as adzes for finishing the boards that have been split out with wedges. Until recently these celts were made of stone. Those found at Lytton are made of light green translucent material and vary in size from more than 4 inches in length by $1\frac{1}{2}$ in width and $\frac{1}{4}$ in thickness, to scarcely an inch in length, with other dimensions in relative proportion. On some the grooves which were made in cutting them out of the blocks of raw material still show slightly. Other specimens have been polished until no trace of these grooves remain.

These celts were made from boulders of greenstone secured along the river bank. Some of these are said to be nephrite. The series of specimens will illustrate their method of manufacture. Grooves were first ground or rubbed into the boulders. In some the grooves had been rubbed from both



REPRESENTATIVE ARCHÆOLOGICAL SPECIMENS*

1 Chipped chalcedony point, $\frac{1}{4}$; 2 chipped basalt point, 2-5; 3, 4, 5 & 6 fantastic chipped basalt forms, $\frac{1}{2}$; 7 antler harpoon point, $\frac{1}{8}$; 8 antler handle of digging stick, $\frac{1}{4}$; 9 stone pestle, $\frac{1}{8}$; 10 stone anvil, $\frac{1}{8}$; 11 slate fish-knife, $\frac{1}{4}$; 12 antler wedge, $\frac{1}{4}$; 13 nephrite celt, $\frac{1}{4}$; 14 serpentine from which pieces have been cut, $\frac{1}{4}$; 15 grinding stone, $\frac{1}{4}$; 16 stone club-head, 1-5; 17 stone skin scraper, $\frac{1}{8}$; 18 whetstone, $\frac{1}{4}$; 19 knife and handle, $\frac{1}{3}$; 20 & 21 antler objects, $\frac{1}{4}$; 22 bone awl, $\frac{1}{4}$; 23 bone needle, 2-5; 24 pair of grooved stones, $\frac{1}{4}$; 25 beaver tooth knife, $\frac{1}{2}$; 26 bone skin scraper, $\frac{1}{4}$; 27 copper war club, from Spuzzum, $\frac{1}{8}$; 28 antler war club, 1-5; 29 & 30 copper ornaments, $\frac{1}{2}$; 31 abalone shell objects, $\frac{1}{4}$; 32 & 33 shell objects, $\frac{1}{4}$; 34 mica pendant, $\frac{1}{2}$; 35 bone pendant, 1-6; 36, 37, & 38 tooth pendants, $\frac{1}{2}$; 39 hair tassel, $\frac{1}{2}$; 40 & 41 dice, $\frac{1}{2}$; 42 antler implement, $\frac{1}{2}$; 43 pipe collected by Dr. Dawson, $\frac{1}{3}$; 44 design on 43; 45 & 46 fragments of pipes, $\frac{1}{8}$; 47 sculptured antler $\frac{1}{2}$.

*Fractions indicate reductions.

sides until a portion was nearly cut off, after which it had been broken away. Such selvage pieces broken off from large boulders were found. A number of finished celts show this break along one or both edges. Fragments of siliceous sandstones with beveled edges that fit these grooves were obtained. They are evidently the saws or grinders used for cutting the grooves.

Whetstones, probably for sharpening celts, slate knives, etc., were made of fine grained schist. They were of frequent occurrence, and were usually found in a group of implements in graves at the main burial place.

Blades for small knives, used in wood-carving, were made from beaver teeth. The posterior side of the long curved tooth had been cut off, which made the tool thinner. The natural cutting edge of the tooth served as an excellent carving instrument. The base is rounded, and was probably inserted in a handle.

A knife-handle made of the rib-bone of some large animal was found in a grave with fragments of glassy basalt, one of which may have served as the blade. The end into which the blade was inserted is covered in places with gum similar to that of the pine. There are 12 notches or tally marks along the side, nearly obliterated by wear. The chipped point of glassy basalt figured with this bone handle, although found on the surface apart from it, shows how well adapted the handle is to the common forms of stone points.

Pairs of coarse siliceous sandstone implements, sometimes daubed with red ochre, were frequently found in the graves and scattered among the traces of hearths and village sites. In general these resemble the arrow shaft smoothers found in other parts of the continent. They have the form of a half cylinder with a groove extending the length of the flat side. When a pair of these are placed with their grooved faces together, they form a cylinder about 6 inches in length, $1\frac{1}{2}$ inches in diameter, and with a central bore $\frac{1}{4}$ of an inch in diameter.

Some fragments of skin, which were evidently portions of blankets or garments, were preserved by the dry climate and the action of copper salts. A considerable series of specimens was secured which suggests the preparation of skins and their manufacture into garments. Scrapers and awls made of stone and bone, and bone needles, belong to this series.

Skin scrapers were made of quartzite pebbles which occur in great numbers in the gravel on the bank of the river and on the mountain sides. Often almond shaped flakes were broken from these pebbles. These pieces are about one-third the thickness of the original pebbles. The finished skin scraper was simply one of these almond shaped flakes which had been perfected by being chipped all around the edge.

Many scrapers of this sort, and some natural fragments of convenient form from neighboring out-crops, have been seen in use among the women of this region for softening skins. They were inserted in the split end of a wooden handle about 3 feet in length, and held there by winding with a thong that portion of the wood that held the stone. After the skin has been fleshed and freed from hair, it is stretched upon a framework of poles and prevented from becoming hard and stiff by being scraped and poked with such a scraper until it is thoroughly dry. Scrapers were also made of bone, but they were of another shape.

Several of them were found finished, and some in process of manufacture. In an ancient grave at Spences Bridge, 22 miles above Lytton on the

Thompson River, a scraper of this kind was found with traces of wrapping at the ends. The Indians of to-day have a scraper of a similar shape, made from a horse's rib or a barrel hoop by winding the ends with rags to form handles. This they use like a draw knife to beam deer skins.

Awls and needles were required for the manufacture of garments. A pointed object made of steatite, about 1 inch long and $\frac{1}{8}$ of an inch in diameter, smoothly polished, was found, as were also several natural pieces of chalcedony which may have been used for awls. The chipped specimen of glassy basalt and the chipped opalescent chalcedony more closely resemble what are usually called "drills" or "perforators." The bone awls are well adapted for use in sewing skins.

Needles made of bone, both fine and coarse, were found in the graves, and scattered through the ground. Each of them was provided with an elliptical eye, with its major axis lying in the axis of the needle.

War.—Many of the implements that were used for hunting were undoubtedly also used in warfare. The points for arrows, spears and knives certainly served either purpose. A number of special war implements have been found. A large dagger or knife made of antler, and much weathered by long exposure, was found on the surface of the main burial site; and from the excavations a much disintegrated war club of particular interest was secured. It is made of an elk antler. The prong near the base is beveled in the shape of a wedge, and the longer branch forms the handle.

A copper war club was obtained by Mr. James Teit from Indians who dug it out of a prehistoric grave at Spuzzum, B. C. This place is at the mouth of the canyon of the Fraser, 42 miles South from Lytton. The practical difficulties of the journey were great before contact with the whites; but the geographical nearness, and the fact that the present Indians of Spuzzum are of the same tribe as those of Lytton, induce me to describe this specimen with those from Lytton. Its edge is beveled, and in some places is knife-like. The grip and base are flanged by lateral pounding, and a design is engraved on each side of the blade.

Dress and Ornament.—Skins and garments woven of bark of the sagebrush and of mountain goat wool probably furnished the material for clothing for the prehistoric people of Lytton. Fragments of deer skin and fabric woven from vegetable fibre, probably sagebrush, and a considerable number and variety of personal ornaments, were found. Red, blue, yellow, and white paint, and probably charcoal mixed with grease, were used for painting the body. Combs were in use, and body and clothing were decorated with ornaments and pendants of copper, stone, shell, bone, teeth and hair. A fragment of a comb made of antler came from the surface of the main burial place. It is much bleached and weathered.

A pair of copper ornaments was found in a grave a foot and a half deep at the main burial site. The body was so much decayed that it was impossible to see what position they occupied in relation to it. There are some pieces of hair preserved and embedded in the copper salts which incrust them. These ornaments resemble in shape similar copper objects which were used in recent times as hair ornaments for girls by certain tribes of the coast.

Other copper ornaments were found while excavating in the main burial place, but the skeleton with which they were buried was too much decayed to distinguish the part of the body upon which they were worn.

They are very thin, much corroded, and may have served as bangles or pendants. A number of pendants or bangles made of sheet mica were found in one of the graves which contained a great variety of objects.

Many irregular pieces of the shell of *Pecten caurinus* with edges rubbed smooth and with one or two perforations, were found in the excavations at the sixth site, and fragments of the same shell were found scattered on the surface of the fifth site. Some of them were daubed with red ochre. Several pieces of abalone shell, with squared edges, were found. One was perforated as a pendant. Such shell ornaments are now highly prized by the coast Indians on account of the iridescence of the shell.

Pendants made of the canine teeth of the elk were found in large numbers in the graves. Sometimes they were lying in the vicinity of the neck bones of the skeleton. The perforation drilled from side to side through the base of the root is usually worn smooth, and many of these objects are stained by copper salts. This again proves that ornaments made of copper were in use. Mr. James Teit has learned from the Indians that elk teeth were often sewed on the garments, and also fastened to the prows and gunwales of canoes with string or gum. One pendant was made of the canine tooth of a wolf, perforated through the root for suspension, and ornamented with three grooves running around it.

Shell beads of various kinds were used for necklaces, fringes, and the like. There are perforated disks or short cylindrical beads which average $\frac{1}{8}$ of an inch in diameter, 1-32 of an inch in thickness, with a perforation about 1-32 of an inch in diameter, drilled with a bevel from each side. Specimens of these shell beads were so numerous on certain parts of the surface of the main village site, that after picking up a great many of them, their number seemed undiminished. Dentalium shells, and sections of these shells cut about $\frac{1}{8}$ of an inch in length, were found, as well as little olivella shells, the ends of all of the latter being broken off, probably to make a hole for stringing. Some of these olivella shells had holes in the body near the lip, which, however, may have been merely accidental. In one of the graves some short cylindrical beads made of sections of dentalium shells were found still upon a portion of the string, which had been preserved by the dryness of the sand. According to identification by Mr. Willard N. Clute, this string is made of the bark of the red cedar. This material is more commonly used on the coast, and may have been imported with the shell beads upon it.

Several tassels made of dentalium shell and hair were found. These tassels are much stained by copper salts. A doubled lock of hair, held in the middle by a loop of string the strands of which are twisted to the right, was pulled up into the shell.

Games, Amusements, Narcotics.—Sets of dice were often found with other objects at the sides of the skeletons. Although beaver-teeth, some of which were covered with red ochre, were found in the same places, and dice made of beaver-teeth were secured from prehistoric graves at Kamloops, B. C., yet all of the dice found here were made from the teeth of the woodchuck. These are so much like the dice made of beaver-teeth which the modern Indians of British Columbia use, that our knowledge of that game enables us to explain these specimens. The counting varies slightly at different places, but the game is practically the same.

The practice of smoking is indicated by the presence of stone pipes. The present Indians of this region mix bearberry with their tobacco to render it less strong for smoking. According to information obtained by Mr. James Teit, before the introduction of manufactured tobacco, the wild, narrow leaved tobacco of the region was used.

The pipes were made from steatite. Blocks of the raw material broken from the rock, and pieces of the same which had been cut and rubbed, were found on the surface. Finished pipes, highly polished, and ornamented with incised lines, have been found *in situ* in the old graves. The bowl of this style of pipe is of the shape of a wine glass, and the stem is simply an extension of the bowl, the axes of both being in a straight line.

Art.—The art of these people is illustrated by paintings, engravings, and carvings, and also by the ornaments used for personal adornment. A small boulder was found on which there was a circle painted in red. Many pieces of bone, antler, etc., are also stained with red ochre, which may or may not have been intentionally applied.

The incised lines on some of the bone tubes that were found may have been intended as decorations. The handle of a digging stick made of antler bears an incised design at each end. The similarity of these designs to those used by the present Indians induced me to request Mr. James Teit to submit drawings of these specimens to several old Indians. Their interpretations are as follows:—

The ladder-like design is a snake or worm pattern, which is intended to represent the striped skin of those animals. When used as patterns in ornamentation, these were generally drawn or carved without showing the head or tail of the animal. The two end designs on the large half of the handle represent a hairy insect. The long line with numerous short lines at right angles to it depicts a snake or a worm, which was probably the manitou of the woman who owned the handle, as it was customary for women having such guardian spirits to carve representations of them on their root diggers. Snakes, wood-worms and other insects, were among the manitous most commonly possessed by women in this region. The root digger and the thumpline were themselves the manitous of some women. The lines which cross each other probably represent cross-trails. The circular design on one specimen represents the butterfly or the eye. The short lines with one very short mark extending from the middle of each may be a sign of the wood-worm, as may also the long lines with marks at right angles to them.

It was customary for men to carve on their pipes, and chiefly on sacred pipes, representations of the beings appearing in their dreams, especially in their first important dream in which they received their manitou. Owing to the secrecy of treatment of sacred objects, it is difficult to obtain specific interpretations of such designs, for these secrets would be kept by the individual even from his friends, and with his death the knowledge of the significance of the design would pass away.

Among the present Indians the following conventional designs are frequently used. A long line and short strokes arranged at regular intervals perpendicular to it usually represent hair or something similar growing from a surface, as trees from the earth. Zigzag lines represent snake-tracks; when they run down, they may mean lightning. Long, straight lines represent trails, creeks, the earth, etc. The grouping of the patterns

on such objects determines the meaning to a certain extent. The similarity of the art designs of the prehistoric people to those of the present native is the strongest argument in favor of the theory that the culture of this area has not materially changed since the times when the prehistoric burial ground of Lytton was in use and the prehistoric sites were inhabited.

Pipes made of steatite, besides being engraved, were sometimes carved. On some there is a ring about the tube where the bowl joins the stem; on others there is a mouthpiece with incised ornamentation. The bowl of a pipe, a fragment only of which was found, was in the form of a head of an animal with its mouth wide open. The material is steatite. A very beautiful animal form carved in antler has a hole drilled through it, tapering from below upward; and another hole from the posterior end of the carving runs forward about $\frac{1}{4}$ of an inch. The legs stand out in relief, while the stripes on the sides are incised. The piece has been broken or decayed in such a way that it is impossible to tell how much, if any is lacking. A head of the same style of carving, in the same material, was found. These carvings so closely resemble each other that one may easily be taken for a fragment of the other.

These animal carvings are entirely different from the engraved designs, and of a higher order of art, which resembles that of both the old and recent coast culture perhaps more than anything else found near Lytton.

No specimens of the ceramic art were found. The modern Indians boil food by dropping hot stones into water-tight baskets containing it.

Method of Burial.—Dr. Dawson, in his notes on the Shuswap, refers to bodies found buried sitting upright, and to others lying upon the side. In still other cases he found a few bones placed in such a manner as to suggest that they were buried after the decomposition of the soft parts. Dawson* saw the Indians in Nicola valley reburying a body that had been dead for about a year. He found the heads of many bodies covered with red ochre, which still adhered to the skull when it was taken up. He considers that the objects buried with the dead were to represent their property rather than to be of any future use to them. For instance, flakes of glassy basalt and crooked arrow points would represent property, though in themselves of little value. Quartz crystals, calcite, mica and stone objects resembling slate-pencils, were found. He saw no iron, and believes that some of the graves at least antedate the coming of the whites to the west coast of America. The bones of small animals and bear teeth indicate that some were hunters, and the stone adzes suggest canoe manufacture. At Lillooet, about 40 miles to the north, Dr. Dawson discovered beads or pendants of galena, and many flat bone beads such as were frequently found by us at Kamloops, but which we did not see at Lytton. He found bodies at Lillooet wrapped in bark.

We did not find any grave in which the body was in a sitting posture. The description of a few graves will serve as examples of the types of graves found by us. In one of them the head was to the east, and the pelvis to the west. The feet were drawn up to the pelvis, so that the knees were in front of the chest. The head rested on the right side. The arms were flexed parallel to the body, with the hands to the face. The whole body rested horizontally. The depth in the shifting sand was a foot and a half.

**Transactions of the Royal Society of Canada, Section II., 1891, p. 13.*

that originally may have been a few inches or from 10 to 15 feet, according to the changes in the superimposed sand caused by the wind. There was a knife made of a beaver tooth at one knee; and many implements of antler and a beaver tooth were in such a position as to suggest that they had been placed in a pouch. This bundle of objects extended in the direction from knee to face.

In another burial the skeleton lay with the head to the north. The body and head were covered with birch bark. Red paint was found at the shins; and white and yellow paint, 6 inches east of the pelvis, or one foot east of the heels. The heels were toward the south, the face toward the west. The body rested in a horizontal position on its right side. The hands were over the face and forehead. Near the chin were dentalia, copper covering a wooden cylinder, as well as pieces of loose copper, and perforated elk teeth stained by the copper. A nephrite celt was secured from below the lower end of the left femur, with the sharp edge toward the east. Charred berries were found above the shoulder. Six inches east of the head were an arrow-point, roughly chipped points, chips, a little nephrite celt, red paint, bone needles and other implements, a knife point made of a beaver-tooth, and animal teeth. Five inches east of the middle of the back a long celt was found.

The skeleton of a young adult lay with head to the north. The body had been flexed as usual. The face was to the east. Little black arrow points were found throughout the grave. Some beaver teeth and red paint were found between the middle of the tibia and the femur of the right leg the left leg was not flexed quite so close as the right.

A group of antler implements and chips of black stone, probably the contents of a pouch, were located a few feet east of this grave, and 4 inches directly west of another skeleton of an older individual, which faced west, with the head to the south. The latter skeleton was disarranged either by the wind or because it had been reburied. With it were found chipped points of stone and pieces of the same material. A pair of grooved arrow-shaft smoothers, 3 whetstones, several finely carved pieces of antler, bone awls and needles, a bone scraper and pendants, dice made of wood-chuck teeth, white paint, pendants of mica, and bits of birch bark.

Grotesquely formed pebbles of various bright and clear colors were sometimes found in the graves, and these may have been prized as amulets or charms. There were some irregular piles of human bones. In the typical graves the bodies were buried upon the side, with the knees drawn up to the chest. They were often covered with pieces of birch bark as was evidenced by small fragments preserved by the dry soil. At the side, in a position indicating that they were buried in a pouch, were found pieces of glassy basalt, points chipped out of the same material, celts, and a number of other implements, varying with each grave. Near the neck elk tooth pendants were frequently found.

Closely rolled pieces of birch bark varying from 1 to 6 inches in length, rolled to a diameter of from $\frac{1}{2}$ an inch to 1 inch, were found in the hearths, scattered over the village sites and over the graves. Whether these originally had paintings or drawings on them is not known. Many of them have been partly burned, which suggests their use as torches.

Pieces of birch bark were sometimes buried with the dead by both the Thompson River Indians and the Lillooets. The latter tribe now extends

from some 40 miles above Lytton into the valley next west, as far south as Harrison Lake. The Lillooets formerly wrapped some of their dead in birch bark, and often lined the graves with the same material.

Conclusions.—The prehistoric culture of the interior of British Columbia as evidenced by finds at Lytton, Kamloops, and Spences Bridge, was quite uniform, although there may have been slight variations in these localities. On the whole this culture resembles that of the present inhabitants of the interior of British Columbia. The mode of life of the prehistoric tribes, their utensils, their methods of manufacture, and even their customs must have been practically the same as those of the recent Indians. One of the strongest evidences for the identity of culture is the ability of the modern Indians to interpret the conventional designs found on prehistoric remains.

There are, however, slight differences between the prehistoric and the recent cultures. These are indicated by the change in the style of arrow heads, which were much larger among the prehistoric people. The ancient type of pipe resembles the prehistoric pipe of Oregon and California, while the recent pipe is practically of the same type as that found on the plains. No indications were found suggesting that the prehistoric tribes knew the potter's art, which, up to the present time, is unknown in this area.

The style of carving exhibited in some of the specimens suggests that at this early time the people of the interior of British Columbia were influenced by the coast tribes, who have developed a very high plastic art. The use of slate fish knives and harpoon points may be due to the same cause. The occurrence of dentalium and olivella shells, and of pendants made of the shells of *Pecten caurinus* and abalone from the Pacific Coast, proves the existence of intertribal trade in that direction. On the whole, however, the prehistoric culture of the interior of British Columbia shows greater affinity to that of the western plateaus than to that of the North Pacific coast. Up to this time we have no evidence of a change of type or of a material change of culture since the earliest times of which we have knowledge.

* * * *

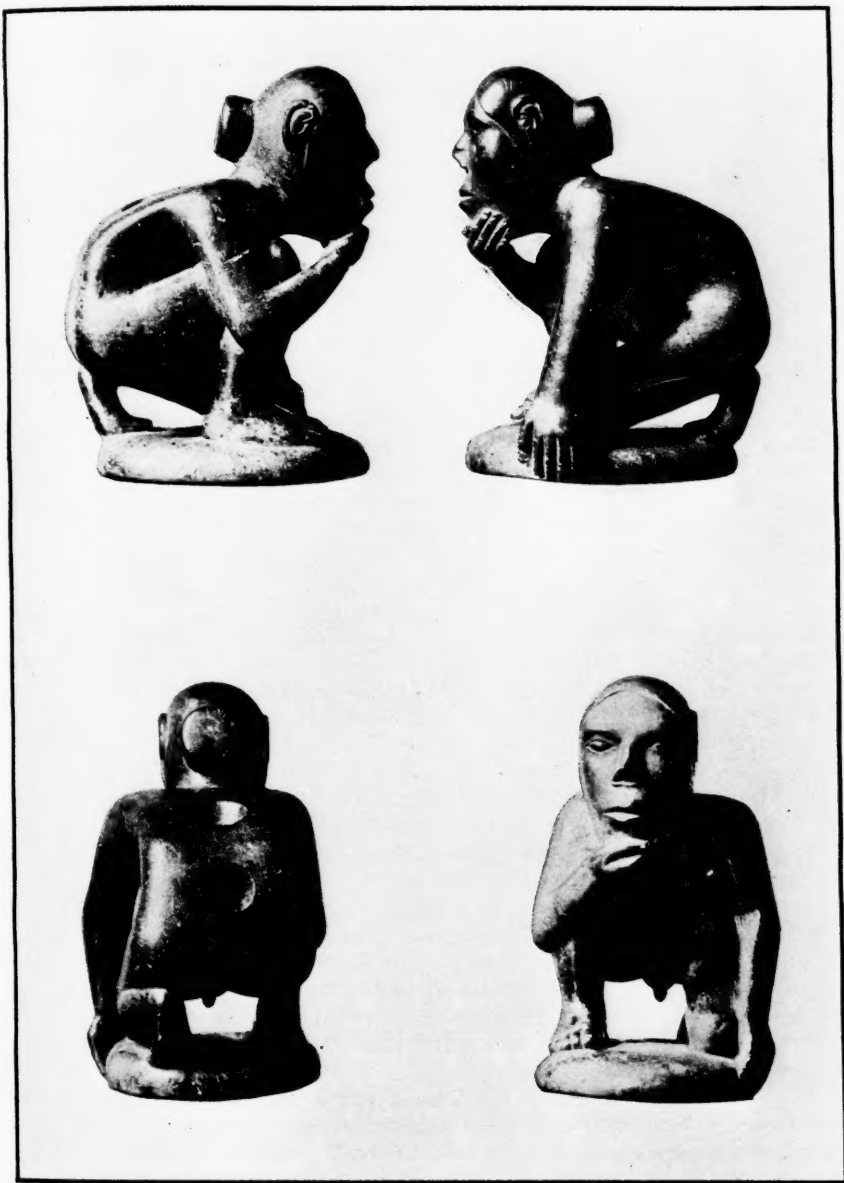
A REMARKABLE PREHISTORIC CEREMONIAL PIPE

BY COLONEL CORNELIUS CADLE

UPON the west bank of the Tennessee River, one-half mile north of Pittsburg Landing, Tenn., and on the Shiloh Battlefield, are seven prehistoric mounds, within a space of about 25 acres. The excavations for building these mounds are plainly apparent, nearby.

The largest of these mounds is at the junction of Dill's Branch and the Tennessee river, upon a bluff 125 feet above low water; built immediately upon the edge, and with such a steep descent to the river as to be practically unclimbable. This mound is 80 feet square, about 25 feet high, covered with large white-oak trees.

The other mounds are oval in the base plan, and the special one that I write of, and have opened, is about the average size of the smaller mounds, viz. 86 feet in its long and 56 feet in its short diameter; 10 feet and 2 inches high from the original surface at its center. All these mounds have large oak trees upon them.



FOUR VIEWS OF A PREHISTORIC PIPE FROM A MOUND ON THE SHILOH BATTLEFIELD

In June, 1899, I commenced driving, in one of the smaller mounds, an open cut, $4\frac{1}{2}$ feet wide, its axis the long diameter; commencing at the base. After three days work, and the work was done with the utmost care, the first "find" was a crumbling skeleton, very near the center and $3\frac{1}{2}$ feet from the top. This was evidently an "intrusive" grave, but not recent. The body had been buried in a recumbent position, looking up the Tennessee River, which is in full view, its feet to the north; and at each ear of the skull were two ornaments of shell, concave at the top and lined with very thin copper. The copper had corroded so there was only left upon one, a piece thinner than writing paper, about the size of one's finger nail, but the concavity of each ornament was of the characteristic green copper carbonate color.

Continuing the work we reached the center, driving about 2 feet further. This cut, commencing at the surface, was driven at a slight angle upward for drainage in case of rain, and because I expected to make a "find" on the original surface and at the center. For a space of about 4 by 5 feet in the center, 8 inches above the original surface (the surface of the cut), the ground, upon striking it with the handle of a shovel, sounded hollow. Going back toward the entrance, 1 foot from the resounding area, a hole was dug 2 feet deep and across the cut, and with knife and fingers the earth slowly taken away, toward the supposed "hollow." We were rewarded in an hour or two by finding first that this "hollow" area had been covered with large logs. Carefully removing this wood, which was decayed, we found the remains of three bodies, the crania, the vertebrae, the arm and leg bones; apparently laid upon the surface of the ground before the mound was started, either in a sitting position; or possibly the bones had been brought there for reinterment, and the burial place had been timbered so as to form a cell or room, but the wood in decaying had caused a cave-in, filling up the room. With one of these skeletons was an ear ornament similar to those described above, but more crude in shape and without the copper lining.

About the center of this burial space we struck something that looked like an arm in stone. For two hours we carefully excavated and dug, not daring to use any implement but our knives and fingers, and were rewarded by finding a pipe in human form, bent on one knee, the bowl and place for the mouth-piece in the back. It is about 10 inches high, carved apparently from either "Catlinite," the "red-pipe stone of Minnesota" or a similar stone. It is the most perfect piece of prehistoric carving that I have seen, much superior in artistic work to any thing of the kind described and illustrated in Force, Short, Bancroft, Thruston and others, or that I have seen in various collections. The pipe was broken at the neck, but has been cemented.

Theories regarding the Mound Builders are useless. But the mound in question seems to show that three persons of importance, with their ceremonial pipe, were placed upon the surface of the ground, covered with logs, and a mound containing about 1,000 cubic yards of earth placed over them.

Pottery was found in the mound, all broken; the pipe was broken. It may be that as their Chiefs had gone to "the shades" they sent, "killing" by breaking, all their paraphernalia, so that the impersonal necessities might become "shades" for their owners' use in the Hereafter.

Notes

IT IS REPORTED that the Archæological Committee at Athens has decided to restore the Erechtheion, the greater part of which is still standing, while all the fragments needed for the restoration lie on the ground near it.

THE PALESTINE EXPLORATION FUND, of London, is going to excavate the biblical Gezer, with Mr. Stuart Macalister and Dr. Bliss in charge of the work. It is expected that this will be a very fruitful site as it is the place in which the French archæologist Clermont-Ganneau discovered bilingual inscriptions (Hebrew and Greek) "which define the limits of the ancient city."

AT POMPEII during September, 1901, there was discovered a marble bas-relief on which is depicted a sacrifice of a ram to Aphrodite. She is seated on a rock holding a lotos-sceptre. Six persons are approaching her, the foremost leading the ram. There are two children in the group. There was also found "a giallo antico head of a Maenad from a terminal figure wearing an ivy wreath," and numerous terra-cottas.

DR. GRENFELL AND DR. HUNT who have recently returned from Egypt, where they have been carrying on excavations for the Egypt Exploration Fund, report a very successful season. They spent two months in the interesting Fayum district, "where they obtained a large number of Ptolemaic papyri, Greek and demotic. In one cemetery was found a number of crocodile mummies which were stuffed with papyrus rolls, like those discovered in 1900 at Tebtunis." The rest of the season they spent on the east bank of the Nile between Benisuef and Minia at Hibeh. In the Ptolemaic cemetery here they found that papyri had been commonly used "in making the cartonnage of mummies."

TWO REMARKABLE BRONZE ETRUSCAN BUSTS have recently been found at Chiusi, that Italian town which has always been so famous for its "bronzes, mirrors, vases and funeral urns." One of these busts is of a male figure with "pronounced features and a beard indicated by incisions as on black-figured vases; the hair is long and covered with a sort of cap, and the chest is covered with scales, which may indicate a fish-body" in which respect it resembles representations of Triton. "The bust is hollow and the inner surface has been strengthened with lead; it has been mounted on wood and seems to have been used for carrying about in processions." The other figure represents a goddess "necklaces and hair falling in plaits on the shoulders presumably a feminine counterpart of the other, however, it is inferior in workmanship although of the same general type." Sig. Milani considers this a bust of Zeus but it may be a Triton type. These busts date from "about 600 B.C."

ENGLISH DISCOVERIES FOR THE PAST MONTH.—A bust of Nero has been unearthed at Caerleon, England, and a stone cist near Dundee which contained a skeleton and an iron ornament belonging to the Roman period. At Haverhill the bones of a mammoth have been discovered, one of its tusks was $6\frac{1}{2}$ and the other $4\frac{1}{2}$ feet long. The tusks were "almost in a state of powder," but the teeth were well preserved. In leveling off a mound 10 feet high and 40 feet in diameter, which is situated near Camberlay, 18 urns containing calcined bones were discovered. "The urns are all of rude British make" but were accompanied

by no weapons or ornaments by which to determine the exact age. Mr. Shrubsole, curator of the Anthropological and Geological department of the Reading Museum, thinks "we should not be far wrong in saying that they belong to the age of Bronze, and probably to a late rather than an early date in that age in this country."

DR. BORCHARDT has been uncovering the chapel belonging to King Ne-woser-Re. A chapel situated at Abusir, Egypt, which dates about 2500 B.C. There is a broad causeway which was built up from the valley to the entrance of the sanctuary. Within there was found a large open court surrounded by colonnades, and beyond were other rooms and galleries, and halls which were adorned with reliefs. There were also found some tombs dating from 2000 to 1700 B.C. Some of these tombs contained besides the sarcophagi articles which the departed would need in the next world. This neighborhood was also used as a burying place as late as the time of the Greeks. In a sarcophagus of this later period was found a Greek papyrus

containing the dithyramb on the Persian wars by Timotheus of Milet (about 400 B.C.), a somewhat long composition by a Greek lyric poet, who has hitherto been known only by name. This work, so highly renowned in ancient times, is the first specimen of this kind of poetry that has been found whilst the manuscript itself, which probably dates from the close of the IV century B.C., is the oldest of all the Greek papyrus manuscripts so far discovered, and is not more than 50 years removed from the death of the poet.

MR. JOHN CARSTANG, a young English archæologist, has just published a book entitled *El-Arabah: A Cemetery of the Middle Kingdom. Survey of the Old Kingdom Temenos*, etc., in which he sets forth the results of his work on the site of ancient Abydos. Among the interesting and important discoveries which he has made is a flat limestone slab on which are recorded the Glorious deeds in Nubia and Palestine which an officer named Sebek-khew accomplished under King Sen-wosret III. (1880-1850 B.C.)

'His Majesty,' says Sebek-khew, 'went north to subdue the Mentiu-Setet' (that is, the Asiatic Bedeen). He came to a great district called Sekmem. When his Majesty resolved to return to his palace (that is his native country), Sekmem allied itself (?) with the vulgar Retenu (that is, Palestine). 'I formed the rear-guard of the army. The soldiers of the army fought with the Asiatics; I took an Asiatic prisoner, and had him disarmed by two of my soldiers. Without wavering in battle, my face was set forward; I did not show my back to a single Asiatic. As King Sen-wosret liveth, I have spoken the truth. And the king presented me with a staff of white gold, and other weapons.'

The location of Sekmem is not known but probably lies in Southern Palestine. This inscription shows how far the kings of the XII dynasty extended their campaign into Asiatic territory.

It has hitherto been supposed that these wars did not begin until the establishment of the new empire, after the expulsion of the Hyksos. This new information is also important in other respects. Sometime ago, C. Sethe, professor in Göttingen, endeavored to prove that the original of Sesostris, the Egyptian hero-king frequently glorified in Greek legends, is not to be sought in Rameses II, as was commonly assumed, but rather (following Manetho) among the Pharaohs of the XII dynasty, known as Sen-wosret, especially in Sen-wosret I. Sethe showed that almost everything that the Greeks say of Sesostris fits the Egyptian Sen-wosret I and his successors. Of the Asiatic campaigns, so highly extolled in Greek narratives, not a word had hitherto come to us from Egyptian sources. The inscription found at Abydos now supplies this lack.

THE ANCIENT RUINS OF RHODESIA.—It has been generally considered that the exploration in Rhodesia had been practically completed by the labors of Bent, Mauch, Baines, Maund, Willoughby, Swan, Schlichter and White. However, a recent book by R. N. Hall and W. G. Neal shows that the work has in reality scarcely been begun. This book is the result of 6 years exploration in the region included between "the Zambesi and the Limpopo," and extending at some points "into the conterminous districts of North Transvaal and Bechuana-land." Scarcely a tenth part of the 115,000 square miles which are included in this region have been thoroughly explored, and yet in this area, there have already been discovered "more than 500 temples, citadels, enclosures, chains of forts,

gold workings, and terraced slopes." Below most of these structures there lies from "10 to 15 feet of accumulated debris of ages" which is untouched as yet. Nevertheless the date of the structures so far examined goes back to 1000 and some possibly to 2000 B.C. Mr. A. H. Keane, in reviewing this book [*Nature*, May 8, 1902], calls special attention to the facts which indicate that Rhodesia was the locality from which the gold of David and Solomon's time was procured.

'Where else but Rhodesia did the ancient Sabaeans obtain the vast supply of gold which they purveyed to Phoenicia, Egypt, and the rest of the then known world? The only answer possible at present is: Rhodesia; and the later discoveries in Rhodesia only serve to strengthen and emphasize this answer.' Hence the inference that Rhodesia was the Biblical Ophir, though the point is not regarded as settled. Indeed in their preface . . . the authors seem inclined to adopt the modified view that Rhodesia was the source and Ophir in South Arabia the importer and distributor, of these treasures throughout the ancient world.

All the different implements, machinery and products of these gold-miners and -smiths, including quartz crushers, "crucibles showing gold in the flux," gold beads, wire, thin sheets, etc., have been found. The total amount of gold already collected from these sources is over "2000 ozs."

THE AUTHORITIES OF THE IMPERIAL RUSSIAN MUSEUM at St. Petersburg are transporting a large "block of stone 12 feet long and 8 feet wide containing a well-preserved bilingual inscription, i.e., Greek and Palmyrene, which is supposed to date from the III century of our era. The inscription is said to contain the tariffs of customs, duties and taxes levied during that period, divided into 3 tables." This inscription was discovered several years ago by the Russian Prince Abemalak Sazareff. The work of transporting it to St. Petersburg is being superintended by Prof. Uspensky a member of the Russian Archaeological Institute. Palmyra or Tadmor has had a peculiarly interesting history, due to its situation in the midst of the Syrian desert "50 hours ride or 150 miles northeast of Damascus." Although it is not located on the shortest route between the Phoenician ports and the Persian Gulf it has for 2000 years diverted the caravan travel to itself on account of its fine springs of water and the political sagacity of its merchants and rulers. At present it is only a small town but from the I to the III centuries of our era it was at its zenith of power. Much of this time it was under Roman control but yet held a practically independent position, especially during the middle and the later part of the III century when Odaenathus and his wife Zenobia ruled the city. To the Romans Odaenathus was a subject, but to the Arabs and Bedouins he was an "independent sovereign, supreme over all the lands from Armenia to Arabia." The wealth of inscriptions which have been found in Palmyra is due to the fad of erecting monuments to those merchants who organized and successfully conducted large caravans across the desert. These monuments took the form of pillars and statues which lined the streets. "Thus arose besides minor streets, the great central avenue which, starting from a triumphal arch near the great temple of the Sun, formed the main axis of the city from southeast to northwest for a length of 1240 yards, and at one time consisted of not less than 750 columns of rosy-white limestones each 55 feet high." Through this avenue passed the motley crowd of Saracen, Jewish, Persian and Armenian merchants with their caravans and attendants to whom the city owed its existence.

THE GREEKS IN INDIA, is the title of a book by Comte Goblet d'Alviella, which has been recently published in Paris. There has been a great deal written on the influence of the Greeks in the East, where inscribed pillars have been found even as far off as Hindustan proving the extent of this influence. Furthermore Colonel Biddulph has reported tribes among the mountains of Hindu Kush "as fair as Europeans, drinking wine, using chairs, and talking dialects even now betraying traces of Greek idiom." Mr. Vincent Smith has shown that the influence of Greece "prevailed on the banks of the Indus for about two centuries before the

Christian era." In fact for the last 50 years there has been a great deal written on this subject. Mr. H. G. Keene in reviewing Count Goblet d' Alviella's work in the *Calcutta Review* brings out the following points:

Among the incontestable facts one has no hesitation in accepting are these: From the time of the invasion of Alexander—who, in 326 B.C., planted colonies and founded cities in the Punjab—the Greek language was known and used in that part of India, as well as in what is known as Turkistan. After the death of the great Macedonian the valley of the Upper Oxus was made into the Province of Bactria, attached to the Seleukid kingdom of Syria; becoming a distinct realm under Diodotus about 256 B.C. This separation of the satrapy was synchronous with an extension of the Buddhist Empire of Palibothra under Asoka who adopted the Bactrian alphabet, and employed it in one of his famous edicts in the extreme N. W. This may indicate that the Macedonian colonies in India were not very strong or influential in the days of Asoka; but that Emperor was himself partly Greek by birth, his grandmother being a daughter of Selenkos. In any case, whatever decline the colonies may have experienced under Asoka, was amply retrieved in the succeeding century, when the success of the Parthians completely separated the Bactrian Greek from their base in Syria, but turned their face towards the south of the Hindu Kush pass. Under this pressure Demetrius—the then Basileus appears to have settled in what is now called 'Sind-Sāgar Duāb'—where he issued bilingual coins, and some with his own haughty Greek countenance surmounted by a helmet made out of, or in the likeness of an elephant's head. About 175 B.C. Demetrius—known in ancient Indian books as Dattamitra—was replaced by a military adventurer named Eucratides, as related by Justin, the historian of the Macedonians. Eucratides, in his turn, was succeeded—and probably killed—by Heliocles (155-120 B.C.) in whose time the dynasty was finally expelled from Bactria, and forced to reside entirely upon Indian territory, by the overwhelming incursions of a Scythian tribe which has been identified with the Jats; the Parthians even became tributary to those enterprising barbarians who, for a moment probably preferred not to entangle themselves in the southward passes.

The first purely Indo-Greek King was, apparently, Apollodotus, celebrated in the *Mahabharat* under the slightly disguised form of Bhagadatta: he is there said to have been 'King of the Yavanas' (or Ionians) whose superiority in fighting power is candidly allowed: This Grecian ruler is represented in the epic as the ally of Arjuna in the battle of Kurukhet, near the modern Panipat, so often the scene of Indian battles.

The culmination of the Grecian influence was reached under Menander who was probably the immediate successor of Apollodotus. Coins with his stamp have been found widely scattered from Cabul to Muttra. Three of these coins "are engraved in M. Goblet's book, and each bears strong signs of likeness: the forehead being in each case high, the nose prominent, and the mouth and chin of refined boldness." There is a Greek inscription on one side and its translation in Sanskrit on the other. The following quotation will give you an idea of the character of the Menander as it has been handed down to us. "Venerable lord!" said a Buddhist doctor, to him on one of the occasions under reference, "Do you desire to argue as a scholar, or as a King?" "What may be the difference?" asked His Majesty. 'The difference,' replied the sage, 'is this: when scholars argue there is no violence, and the one who is convicted of error has to acknowledge his conviction. When the King disputes on the other hand, those who disagree with him are liable to be punished by his people.' 'In that case,' announced Menander, 'let us be scholars: Your Reverence is free to cast aside all reserve, as if discussing with a colleague, a disciple, or slave.'

The Scythians followed the Greeks across the Hindu Kush mountains and for a while the two ruled side by side during the later part of the I century B.C. Mr. Keene concludes that the Grecian influence was "confined almost entirely to æsthetic matters, such as medal casting, architecture, statuary and some forms of literary art."

n
k

n
d
s
e
e
e
e
n
t
y
d
r
n
l
e
e